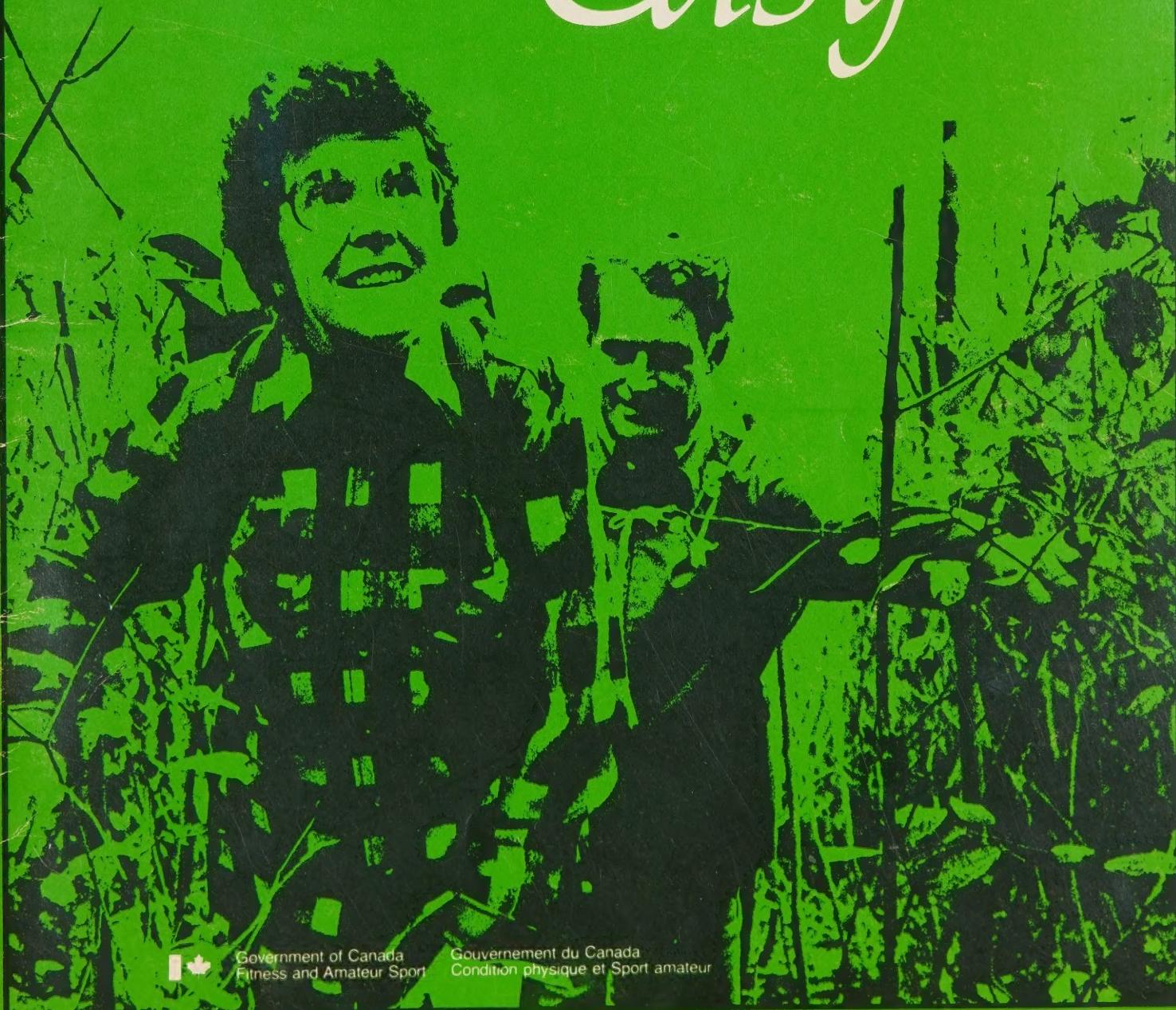


*Fitness for The Older Canadian*

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# Don't Take It Easy

CAI  
HW&2  
— T13



Government of Canada  
Fitness and Amateur Sport

Gouvernement du Canada  
Condition physique et Sport amateur



# Don't Take It Easy

## Prologue

Dr. Paul Dudley White, one of the world's most famous cardiologists, accepted an invitation to talk to a group of prominent citizens in New York City, on physical fitness and health.

On his arrival he became aware that the theme of the meeting was "**Take It Easy**".

Dr. White's first action after being introduced was to change the theme to "**Don't Take It Easy**". He believed most emphatically that staying active can help one enjoy a more healthy, vigorous and satisfying life, and slow down or even reverse the physical decline normally associated with aging.

This booklet supports this belief and is designed to give older Canadians some practical information about physical activity and its relationship to health, aging and well-being.

It also contains a home exercise program designed to be both safe and effective for older persons.



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1974  
CANADIAN SKI  
MARATHON  
CANADIEN DE SKI



1

SKIER

*"Moses was an hundred and twenty years old when he died; his eye was not dim, nor his natural force abated."*

Deuteronomy 34:7

# Use It or Lose It

A key factor in living fully during the mature years is our attitude toward life. There is a great temptation to "take it easy" and surrender to the feeling that it's too late to begin an exercise program.

Age is no barrier to fitness. Studies show that inactive men and women in their 80s and 90s can still improve their fitness and well-being with a regular progressive activity program.

The human body was not designed for the spectator role. With prolonged inactivity, such as confinement to bed, muscles become weak and limp, joints stiffen, bones become more brittle, digestion is impaired, endurance, strength and physical skills decline. This physical decline results from disuse and occurs at any age when the body is deprived of physical activity. After weeks in outer space with no opportunity for exercise, the Apollo astronauts were unable to stand when first released from their space capsule. This was an astounding demonstration of "Atrophy Through Disuse"—the physical deterioration that quickly occurs in the absence of exercise.

The physical decline often associated with aging parallels the effects of "Atrophy Through Disuse". The body however is a remarkable

machine. Though it breaks down when not used, it has great recuperative powers.

An active lifestyle cannot guarantee you a longer life or freedom from disease. It does ensure a more vigorous enjoyable lifestyle, and in the event of illness or surgery, a better chance of survival and the best possible recovery.

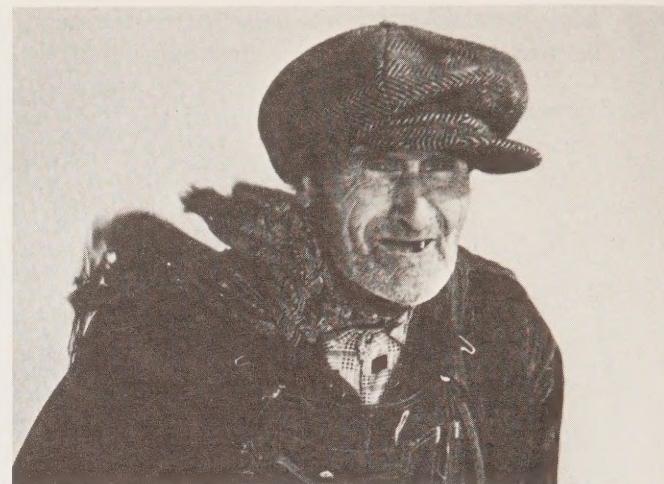
## TEN GOOD REASONS TO JOIN THE ACTIVE SENIORS

1. More efficient blood circulation and breathing; improved muscle function.
2. Improved digestion; less constipation.
3. Stronger bones; more supple joints.
4. Attractive appearance and control of body weight.
5. More energy and pep.
6. Increased confidence and well-being.
7. Opportunities for socialization and friendship.
8. Improved mobility; less chance of falls or accidents.
9. Continuing independence.
10. Increased fun and enjoyment.

*"Those who think they have no time for bodily exercise will sooner or later have to find time for illness."*

Edward Stanley, Earl of Derby

# Your Time - What Are You Doing With It?



Canada's population is growing older year by year. Persons 65 and over now form a bigger proportion of the total population than ever before. Earlier retirement and increased life expectancy have lengthened the post-retirement years, thus providing more time for creative living.

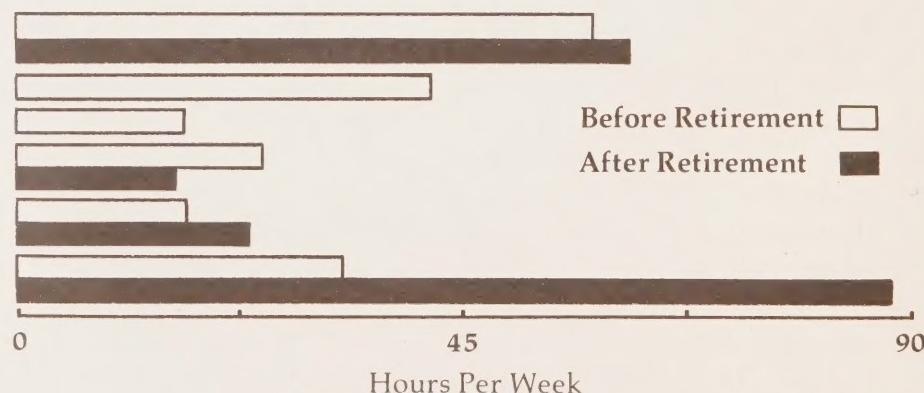
If you are 55 to 65 years of age and retired or about to retire, you probably have one quarter of your life ahead of you and almost 12 hours of uncommitted time each day. You have an important choice to make regarding the use of that time. It is yours to invest.

Retirement does not mean the end of productive work. Aging alone has little effect on intellectual functioning and learning ability. Many older Canadians pursue mental and emotional growth throughout the mature years with a continuing involvement in intellectual, social and political activities.

Participation in physical recreation or fitness activities is a positive addition to your lifestyle and a productive use of your time. The post-retirement years are an ideal time to enjoy such time-consuming recreation as golf, lawn bowling or curling. In addition, facilities for these activities and others are more readily available during weekdays.

## How Time is Spent

- Sleeping, eating
- Working
- Commuting to work
- Family activities
- Home, Shopping
- personal grooming
- Leisure, uncommitted time



*"Since learning to crosscountry ski, I don't have to go south any more. I enjoy it here too much."*

D. Viner, age 73

# Move More... Live More

Fitness is a personal challenge anyone can achieve. It is a goal that reflects your condition, your capacity for physical exertion and your needs. Start with what you can do, no matter how little that is. Each day do just a little more. This gradual progression is fundamental to improving your fitness level.

Most adult Canadians suffer minor physical problems such as sore knees or poor eyesight. Some of these physical complaints are permanent losses with which the individual must learn to live. What matters is not what is lost but what is retained. Appropriate exercise and the advice of your physician can alleviate minor problems and help an individual overcome the side effects of many disabilities.

Physical fitness is equally important for women and men. Judith Kazdan is a 60-year-old housewife from Toronto and a marathon runner. She began jogging with her husband when she was 46.



"I was chubby and a little dumpy then", she said. "I was married at 28 and over the next 18 years had four children and no exercise. Not many women were motivated to get out of the house then."

For the first year, she slowly walked and jogged one mile. With each succeeding birthday, Judith graduated to longer distances and increased personal fulfillment. Her exceptional accomplishment dispels the myth that women cannot perform vigorous activities; her trim and graceful figure is living proof that fitness does not mean a tough and muscle-bound appearance.

You don't have to jog 26 miles to be physically fit. You don't have to endure a strenuous schedule of regimented exercises. There is no need to compete with anyone.

A sound fitness program is one that is gradual, satisfying and appropriate for you. It may even keep you home in Canada during the winter!



Courtesy: The Globe and Mail, Toronto

*"The art of living consists of dying young but, as late as possible."*

Motto of the American Health Foundation.

# Lifestyle

## The Fountain of Youth

Ponce de Leon, the early explorer of Mexico and Florida, spent a major part of his life looking for the Fountain of Youth. There are those who are still looking. Some people think they have found it in miracle compounds, special diets or magic exercise machines.

You do not need gadgets that heat up, belts that vibrate or any other gimmicks advertised in magazines or newspapers. They are unnecessary, expensive and sometimes dangerous. To feel good and look good you have to move and improve your own machinery; there is no substitute.

Reputable exercise clubs are useful but only if you use them enough to justify the costs. Visit a club which you can conveniently attend regularly. Before signing for a membership check to see that instructors are qualified, and that fitness programs are appropriate for your needs. Distrust any that offer instant weight loss or effortless fitness.

Getting into shape takes time and effort not money. It may take six weeks, three months, or a year to regain a good level of fitness. Once there, stay there with regular activity that you enjoy.

**The Fountain of Youth is not found in Pills or Mysticism.** It is found right under our noses in a healthy lifestyle which protects the body from deterioration with the passing of time.

Roland Michener, former Governor General of Canada, at age 78, enjoys a noon-hour jog with Toronto school children.



Courtesy: Saskatoon Star-Phoenix

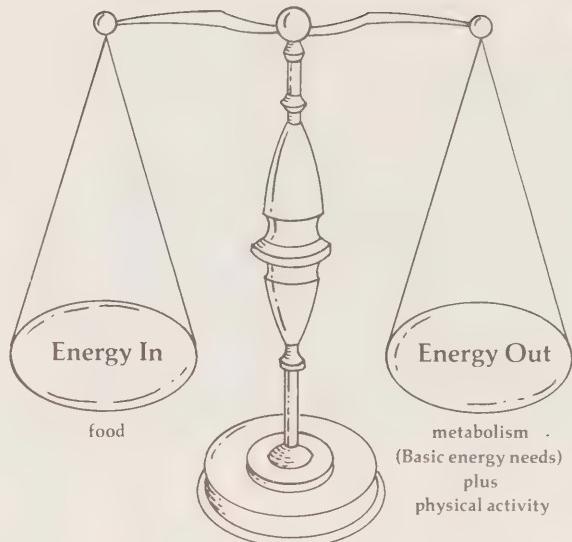
*"The choice of foods become more critical with age since less food must satisfy daily nutrient requirements."*

in a paper by T.K. Murray and H. Nielsen\*

# A Matter of Balance

A balanced diet is crucial for optimal health and fitness at all ages. Older Canadians need nutrients in the same proportions as younger people do; only energy needs change. As your metabolism (basic body energy needs) slows with age, fewer calories are needed. But you must still eat an assortment of foods to give your body the variety of nutrients it requires. Plan nutritious and appealing meals and snacks using Canada's Food Guide. In addition, it is wise to drink plenty of fluids, limit foods that are high in sugar, saturated fat and cholesterol, and use salt in moderation. For more information on nutrition, refer to Additional Resources p. 40 or consult with a counselling dietician.

Staying active is important for digestion and elimination and allows an individual to eat more, increasing the likelihood that the body will receive all needed nutrients. For those who like to eat, physical activity has added advantages! Combined with sensible eating, regular exercise enables an individual to control body weight.



Our body weight is the result of an energy balance. When this balance is upset, weight is lost or gained.

If you want to reduce excess poundage, do it the way you gained it — gradually. Crash diets are unhealthy, unbalanced and usually give short-term results.

Cut down on high-calorie desserts and fried foods and decrease portion sizes. Concentrate on retraining your eating patterns.

Move as often as possible and burn energy (calories) with exercise. By walking away 100 extra calories per day (approximately 1.6 kilometers or 1 mile) you can lose 4.5 kilograms (10 lbs.) in a year!

## Energy Out

To burn up approximately 100 calories\*

Activity	Time
clean windows	30 minutes
dance	30 minutes
garden	20 minutes
bicycle (7km/hr)	20 minutes
bowl (non-stop)	20 minutes
walk (fast pace)	18 minutes

\*For a 68kg (150lb.) person

\*T.K. Murray, former chief, Bureau of Nutrition Sciences and H. Nielsen, chief, Nutrition Education, Health and Welfare Canada.

# Lifestyle Quiz

Health and Fitness are by-products of the way we live. Ask yourself the following questions:  
**YES (✓)**

## Driving

- Do you and your passengers use seat belts?
- Do you stop and walk around every hour on long drives?

## Eating

- Have you maintained your weight at what it should be?
- Do you eat a wide variety of food each day including something from each of the four food groups — milk; fruits and vegetables; bread; meat and meat alternates?

## Exercise

- Are you active every day?
- Do you engage in moderate exercise of an endurance type (e.g., swimming or walking) three times a week?
- Do you participate in physical recreation (e.g., golf, gardening or dancing) in your leisure time?

## Drinking and Drugs

- Do you use alcohol in moderation? (i.e., less than 15 drinks a week)?
- Do you use drugs such as tranquilizers or sleeping pills only under a physician's direction?

## Smoking, Stress and Safety

- Are you a non-smoker?
- Do you experience adequate rest and relaxation?
- Do you have regular medical and dental check-ups?
- Do you practice good personal safety habits?
- Are you able to cope with normal "everyday" problems and worries?

If you answered (✓) Yes to all these questions, Congratulations — you have a commendable lifestyle based on sensible habits and a lively awareness of personal health.

Lifestyle is the unique pattern of your daily life. Positive changes can be accomplished with a new attitude and the decision to act. For further information on diet, alcohol, smoking, and stress, see Additional Resources p. 40 of this booklet.

*"Grow old along with me! The best is yet to be, The last of life, for which the first was made."*

Robert Browning

# Getting Started - Some Questions and Answers



## Should I see my doctor before beginning an exercise program?

If you are unaccustomed to exercise or intend to engage in strenuous fitness pursuits, it is advisable to check with your physician first. Consult the Physical Activity Readiness Questionnaire (p. 26) for further guidance.

## Do I need a fitness test?

After medical evaluation, your physician may or may not advise you to take a physical fitness test. Such assessments measure your capacity to perform and determine your initial fitness level.

More-complex tests enable a trained professional to monitor your reaction to exercise. Such a specialist can then advise you of any individual restrictions or modify a fitness program to suit your needs.

## What equipment and clothing do I need?

Wear loose, light, comfortable clothing suitable for the weather and your activity. Comfortable, good-fitting footwear is essential. Purchase a good pair of shoes with a well-cushioned sole.

For home exercise, no special equipment is necessary. Background music with a good underlying rhythm improves performance and makes exercising more fun. A stationary bicycle (sturdy, with adjustable tension) is also useful and can usually be acquired second-hand.

Attend a learners clinic or seek advice from a reputable sporting goods store before purchasing specific sports equipment. Good equipment is often at minimal cost during the off-season.

## When is the best time to exercise?

Any time that suits you is good for activity although most people prefer to avoid vigorous exercise immediately after a meal. It is wise to postpone your fitness program if you have a temporary minor illness such as a cold. Use the outdoors as much as you can but avoid exercising on hot humid days or extremely cold ones. For safety, exercise indoors when sidewalks and roads are icy.

## Do I need to join a fitness class?

You can achieve and maintain a good level of fitness by performing an individual program from your own home or apartment. An example of such a program consisting of calisthenics and walking begins on page 27 of this booklet. Exercising with a spouse or friend adds to the fun and likelihood you will keep it up. Joining an organized fitness or recreation group has added advantages. Most are informal and fun, featuring music and laughter, social interaction and group motivation. A good instructor will use a gradual approach and insure that each member participates at his or her own appropriate level.

Many senior citizens centres, YMCAs, YWCAs, YMAs, the Red Cross Society, and community recreation centres conduct fitness classes for senior adults.

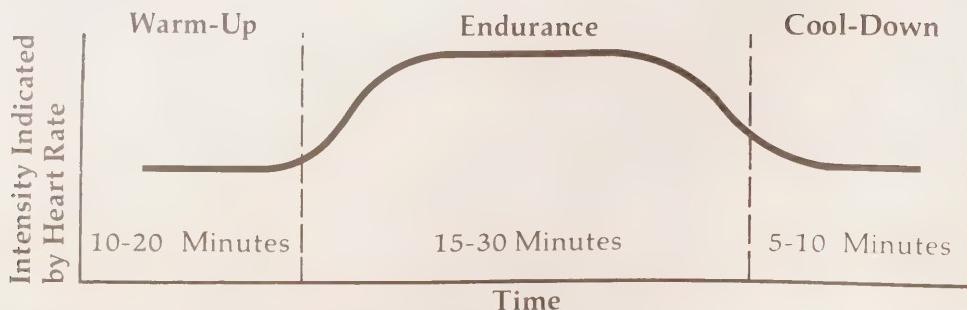
## What does a complete fitness program consist of?

Different activities do different things for your body. An optimal level of physical fitness is best achieved by enjoying a variety of physical activities that are a part of one's normal lifestyle. Regular exercise is the key. It is better to do a little every day than engage in occasional weekend bouts of strenuous activity.

A specific fitness activity such as walking, exercising to music or playing tennis should always include the following three phases:

- 1 **Warm-up:** gentle exercise and stretching to increase flexibility, prevent muscle soreness or injury, and prepare the body for more strenuous activity.
- 2 **Endurance:** more-strenuous exercise to tone muscles, and vigorous activity such as brisk walking or cycling to develop the heart-lung system.
- 3 **Cool-down:** gentle exercise to allow a gradual transition from vigorous exercise to the resting state, to prevent muscle soreness and to promote relaxation.

## A Typical Exercise Session

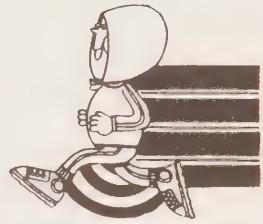




*"The prescription for physical activity or exercise is as important as prescription for medication."*

Lawrence J. Frankel

# *Prescription for Physical Activity*



## R

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- 1 Move:** walk, climb, ride a bike. **Dosage:** every day as often as possible.
- 2 Stretch and Deep Breathe:** Take an exercise break and relax. **Dosage:** Daily as needed when tense.
- 3 Push, Bend, Twist, Swing:** use your body as it was designed to be used. **Dosage:** At least three times each week.
- 4 Walk, Swim, Cycle, Ski:** 15 to 20 minutes of continuous aerobic activity, vigorous enough to increase your heart rate, and make you breathe deeply. **Dosage:** At least three times a week.
- 5 Enjoy Life:** spend time at sports, hobbies or outdoor activities. **Dosage:** two-hour period at least once a week.

*Lawrence J. Frankel* M.D.

\*Keep this prescription within reach of all children and adults.

"The journey of a 1,000 miles begins with little steps."

Mao Tse-Tung

# Daily Activity is Important



Daily physical activity, even in brief modest amounts, is essential for the maintenance of mobility and control of proper body weight. In our technological society we have to avoid labour-saving devices and search out daily opportunities for movement whenever possible. Some suggested ways of doing this include spreading grocery shopping over several days, walking to the store and carrying small parcels home, using the stairs, doing your own home maintenance and housework. Aim for at least one hour a day (spread throughout the day) in this type of incidental activity.

Like diet, activity has its cumulative effect each day. Minutes of extra activity soon add up to hours, and the energy (calories) spent results in pounds lost. Small differences in the amount of energy used in everyday tasks can amount to a significant change in body weight over time.

## Minutes of Everyday Activity Count

Activity	Calories per minute
Resting in bed	1.2
Standing	1.6
Washing clothes	2.9
Walking, in the house	3.4
Ironing clothes	4.2
Making beds	5.3
Pushing wheelbarrow	6.2
Walking upstairs	7.6

## To Travel 4 km (2.5 miles)



*"A person who breathes correctly relaxes more quickly, is more self-controlled and enjoys an improved physical condition."*

Vicki Leclair\*

# *Stretch, and Deep Breathe*

To prevent premature degeneration of muscles and joints, use them every day. The best place to start is in bed upon waking. Breathe deeply while you slowly stretch and move every joint in the body. Greet the morning the active way!

**Flexibility**, a very important component of fitness for seniors, can be maintained with daily stretching and habitually moving the joints through the full range of motion. Staying supple helps prevent injury and many of the aches and pains associated with aging. It is essential for everyday tasks such as reaching for a top shelf and helps maintain both attractive posture and efficient movement.

Gains in flexibility are quickly evident with regular bending, stretching, twisting and moving. Stretches or twists should be performed s-l-o-w-l-y and rhythmically, with a smooth, firm motion. Stretch as far as is comfortable, then hold that stretch without bouncing for 5 to 15 seconds. This method eliminates pain and prevents injury.

Long periods of sitting often result in excess muscle tension, headache or fatigue. When watching television, working at a desk or riding in a car, take regular "exercise breaks" to relieve this tension. Stretch and loosen up, s-l-o-w-l-y turn your head, shrug your shoulders and pull them back. Stand up and walk around to get the blood moving again.

**To maintain proper circulation and ease of movement, periods of inactivity should not exceed one hour.**

Correct breathing techniques will increase the amount of oxygen in the blood, keep the chest muscles supple and promote relaxation. Try to breathe in through the nose — deep breaths that begin in the abdominal area. Exhale through the mouth in a slow controlled manner. Whistling, singing, walking out-of-doors, swimming and climbing stairs are other activities that stimulate respiration.

Never hold your breath when exercising, as this raises the blood pressure and increases the load on the heart. Try to breathe out or "exhale on effort" when performing the more difficult part of the exercise.

\*Vicki Leclair — Director, Senior Citizens' Program, Quebec Division, the Canadian Red Cross.

*"A long life is needed to be young."*

Picasso, at age 91



# Push, Bend, Twist, Swing



Few older Canadians are interested in building muscles or becoming highly skilled athletes. Nevertheless, a certain degree of muscular endurance and strength is essential for mobility and enjoyable participation in physical recreation. Weak and flabby muscles lead to an unattractive body shape and poor posture. In addition, most back problems are directly related to a lack of muscular endurance, particularly in the abdominal area.

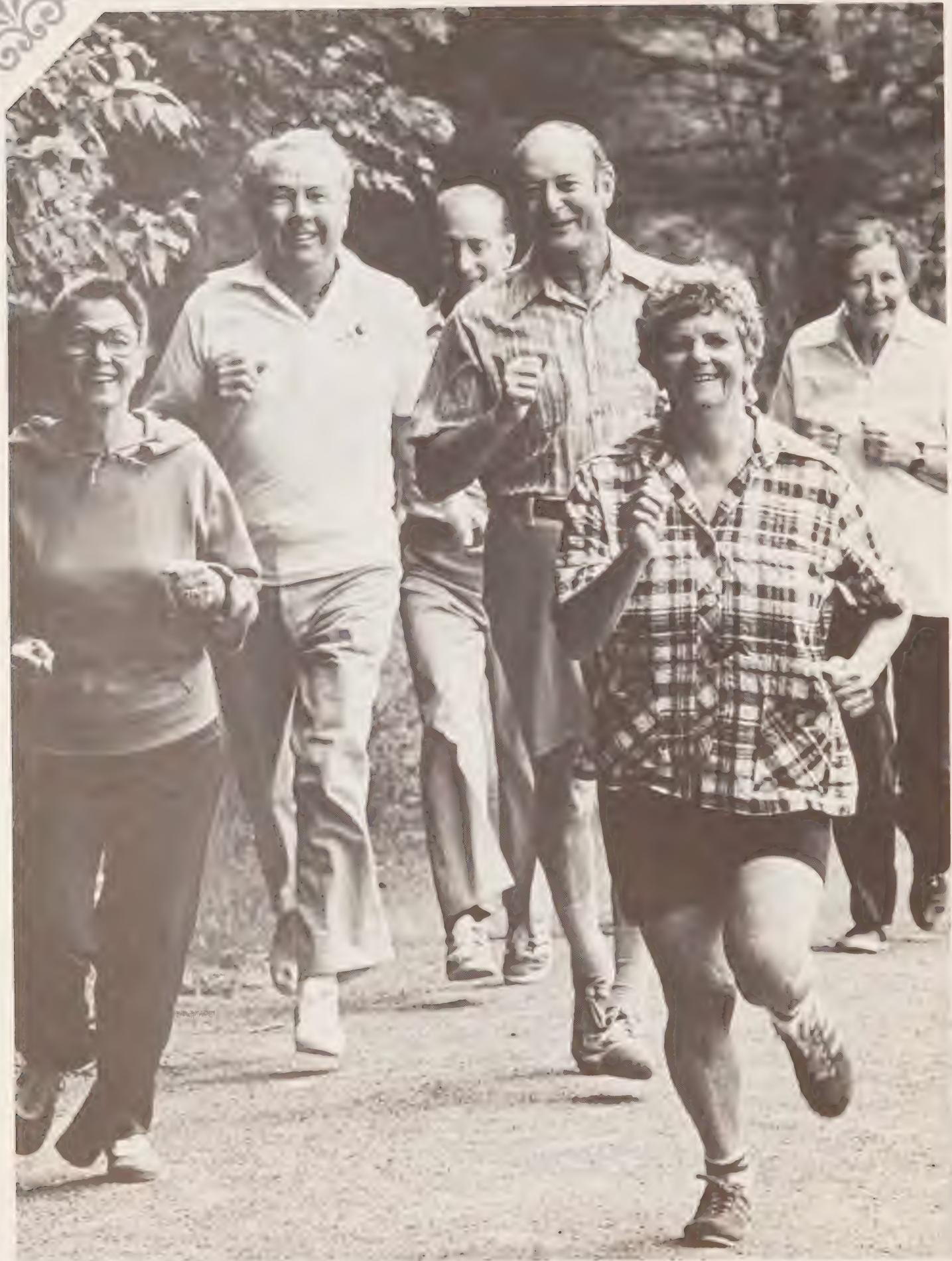
Firm muscle tone does not require that you lift heavy weights. Indeed, since this type of exercise demands a great oxygen supply and causes a rapid increase in blood pressure, it is not generally recommended for the average senior.

Using your muscles daily will help maintain strength — lifting small objects, pushing a vacuum, baby carriage or wheelchair, carrying your own groceries. Additional calisthenics such as sit-ups, which use your own body weight as a load will further shape your muscles and help sustain a youthful physical appearance.

Activities such as walking, cycling, or climbing stairs develop strength in the legs.

Exercise in the water is an ideal way to develop muscle-tone. Aqua-fitness classes have become increasingly popular in the last ten years. It is especially appropriate for those with muscle or joint problems or for individuals who are overweight. Water buoyancy enables the performance of corrective exercises without strain.

Sports such as tennis, golf, horseshoes or bowling help maintain upper body tone, while activities such as swimming or cross-country skiing benefit all the major muscle groups in the body.



*"A man is as old as his arteries."*

Thomas Sydenham

# Walk, Swim, Cycle, Ski

Aerobic activities such as brisk walking, jogging and swimming are those that demand oxygen for performance; they are rhythmical and continuous and involve large muscle groups. The body adapts positively to this type of exercise.

As an individual becomes better conditioned, the heart beats more slowly at rest and during work, while supplying more oxygen to the working muscles and the rest of the body. By expending some 2,000 extra heart beats during an exercise session, one can save 10,000 to 30,000 beats over the remainder of the day.

Although we have no conclusive proof to date that exercise will prevent heart disease, it is clear that regular aerobic training can improve the efficiency of the cardio-respiratory (heart-lung) system by 20% or more, increasing youthful vigour and preventing the decline in stamina usually associated with aging.

There is also mounting evidence of the important role exercise plays in the control of certain conditions which increase the risk of heart disease. Regular, moderate aerobic exercise has a positive effect on blood pressure and blood fats, helps prevent weight gain and relieves stress. Most individuals beginning a fitness program become more conscious of other health habits. Studies show that they often improve eating habits, decrease use of alcohol and tobacco, and engage in more physical recreation.

Moderate exercise is now a part of many rehabilitation programs for heart-attack patients. It should be stressed, however, that if there are any indications that you have heart problems, your fitness program should be approved and supervised by a physician.

How often (frequency), how hard (intensity), and how long (time) you exercise are the key variables in aerobic exercises.

## Frequency

Fitness cannot be stored. Best results are gained with three to five aerobic sessions a week.

Increased stamina, resulting from these sessions, is permanent only as long as you continue to stay active.

## Intensity

Aerobic exercise should be vigorous enough to make you breathe deeper and more quickly. You will experience a rise in body temperature and your heart will beat more rapidly than it does during routine activities. Exercise which is milder than this is better than nothing but not sufficient to truly benefit your heart. The guiding rule is "train, don't strain" and progress gradually at a rate which suits you personally. Paying attention to your body signals will guide you in establishing your own limit. Slow down and rest if you become winded during exercise or if you are fatigued on the day after your work-out. Exercise intensity can be further measured by monitoring your heart rate, a technique explained in detail on page 35.

## Time

Fifteen to twenty minutes of aerobic exercise enables an individual to obtain and keep a good level of fitness if the intensity is sufficient. For older people, a longer training period (30 to 60 minutes) with a lighter intensity is recommended, particularly in the earlier stages. Begin with five minutes or less at a comfortable pace, and gradually increase duration or distance when you feel ready for more.

Choose aerobic activities that you enjoy: if you dislike water, you'll never keep up a swimming program, so opt for something else like cycling or walking. Consider such factors as cost, equipment, facilities, weather, companions, risk of injury and fitness benefits.

## Walking

Walking is the single most readily available activity for the older Canadian. It is a natural movement involving some 150 pairs of muscles in the body and one that can be safely continued all the years of your life. Vigorous walking, hill-climbing or hiking can do as much for your fitness as jogging, with less strain on the joints or muscles. For many people, long daily walks provide mental relaxation and an essential contact with nature, as well as physical training.

Swimming and walking in the water develop all-round fitness and are particularly helpful if leg problems such as varicose veins or sore knees occur. Other continuous aerobic activities include cross-country skiing, skating, snow-shoeing, cycling and continuous movement in a manually operated wheelchair. Older individuals can cycle on a threewheeler or pedal a stationary bicycle while watching a favorite television program. Be wary of motorized exercise bikes that do the work for you. Remember, the training effect on the heart depends on the appropriate duration and intensity of your effort.

# A Few Words of Advice

## About Aerobics

- Take the "Talk Test". Can you carry on a conversation while exercising? If you cannot — slow down.
- See your doctor if any of the following warning signals occur during or after exercise: dizziness, nausea, tightness in the chest, persistent shortness of breath or muscle soreness.

## About Sport

- Get in shape to play sports — improve your fitness level first, then accept the challenge of the game.
- Choose sports for skill and co-ordination, rather than those that stress speed, strength or endurance.
- Avoid body-contact sports or games that require sudden stops and starts.
- Choose opponents of approximately your level of fitness. Do not *over-strain*.
- Remember to warm-up before the game and cool-down afterwards.

## About Exercise

### AVOID:

- Any exercise that hurts. Movements should be gentle and comfortable.
- Deep knee bends. Flat-footed **half-knee** bends are acceptable.
- Rapid or vigorous turning of head and neck.
- Exercises that may be harmful to the back. These include straight leg toe touches, raising and lowering **both** legs while lying on your back, and other exercises which over-arch the back.
- Isometrics — exercises with no relaxation phase, such as pressing the palms of both hands together as hard as possible for a period of time.



*"We are happy when however briefly, we become one with ourselves, others and the world of nature."*

David Cole Gordon

# Enjoy Life

Loneliness, depression and anxiety are common at all ages. The post-retirement years may bring additional stress such as leaving the labour force, illness or the loss of friends and family. Participation in active leisure pursuits provides renewed opportunities for fun and social involvement. In addition, studies have shown moderately vigorous activity to be more effective than the use of tranquilizers in the release of tension, anger, or frustration.

Dr. Hans Selye, an internationally famous Canadian expert on stress, has shown that not all stress is destructive; indeed, a certain amount of change and challenge is needed to remain alert and happy.

"Successful activity", says Dr. Selye, "provides you with an exhilarating feeling of youthful strength, even at an advancing age."

At age 73, Dr. Selye successfully meets the challenge of stress with a continuing involvement in writing, research and speaking engagements. To prevent physical degeneration, he sets aside an hour a day to keep his muscles trim by swimming or riding a bicycle around the McGill University Campus.

Active individuals sleep better and relax more readily. In addition, sport and exercise can help reduce physical and psychological tension. Hobbies and handicrafts such as painting, pottery, carpentry or macramé provide an outlet for creative expression while helping to maintain fine motor skills and muscle functioning in the hands and fingers.

## Enjoy Life

**With nature:** sailing, bird watching, snowshoeing;

**With others:** bowling, shuffleboard, picnics;

**With your partner:** dancing, skating, moonlit walks.

**With yourself:** gardening, fishing, handicrafts and hobbies.



# *An Exercise Program for the Older Canadian*

## **Guidelines for Use**

- 1** Wear comfortable, loose-fitting clothing and remove any dangling jewelry. The exercises may be done in bare feet but solid good-fitting shoes with low or no heels are essential for the walking part of the program.
- 2** Make exercising more fun by using music. Turn on the radio; play a record or tape with a good underlying rhythm.
- 3** For optimal fitness benefits, perform the complete program every second day (three to four times a week). The Warm-Up and Cool-Down exercises may be used at any time to loosen up or to help you relax. The endurance activities must always be preceded by a warm-up and followed by a cool-down.
- 4** Postpone your participation when you have a temporary illness or when the weather is extremely hot or humid.
- 5** If any exercise hurts during execution, change it. Some stiffness is normal when you begin. However, if this persists or you feel unduly fatigued after exercising, you have worked too hard. Slow down and progress more gradually.
- 6** Stop exercising and consult your physician if any of the following occur: nausea, dizziness, breathlessness or tightness in the chest.
- 7** Ensure a good base of support to avoid falls. Use a wall or chair for support when bending or balancing.
- 8** Breathe normally, trying to "exhale on effort", i.e. breathe out when performing the more difficult part of the exercise.
- 9** Perform all the exercises in a smooth, rhythmical manner, allowing the muscles to relax after contraction. Hold the stretches for 5 to 15 seconds and do not bounce.
- 10** Know your own limits and progress at your own speed. Repeat the slow stretches two or three times. Start with two or three repetitions of the other exercises, then gradually increase the number of repetitions (add one or two a week). Stop when you experience "pleasant fatigue" in the working muscles.
- 11** The exercises marked with a star (★) are particularly important for maintaining postural muscles, and preventing and relieving low-back pain. The exercises marked with a triangle (Δ) are particularly important warm-up exercises to use before aerobic activities or prior to playing a sport. If doing a shortened program, include those exercises marked (★) and (Δ).
- 12** **HAVE FUN!**

# Let's Begin

Take a moment to complete the following questions taken from the Physical Activity Readiness Questionnaire (PAR-Q).

## PAR-Q

YES NO (✓)

- 1 Has your doctor ever said you have heart trouble?
- 2 Do you frequently have pains in your heart and chest?
- 3 Do you often feel faint or have spells of severe dizziness?
- 4 Has a doctor ever said your blood pressure was too high?
- 5 Has your doctor ever told you that you have a bone or joint problem such as arthritis that has been aggravated by exercise, or might be made worse with exercise?
- 6 Is there a good physical reason not mentioned here why you should not follow an activity program even if you want to?
- 7 Are you over 65 and **not accustomed** to vigorous exercise?

Reference: PAR-Q Validation Report, British Columbia, Ministry of Health, May 1978.

If you answered yes to one or more questions, consult with your physician before using the Exercise Program, increasing your physical activity and/or taking a fitness test. Show this booklet to your doctor and seek advice as to which exercises or activities are suitable for your specific needs.

If you answered no to all questions you have reasonable assurance of your present suitability for use of this Exercise Program, a gradual increase in other physical activities or a fitness test. If, however, any aspect of the program worries you, or you intend to engage in vigorous activities more strenuous than walking, it is advisable to consult with your physician.

# WARM-UP: LIMBER AND STRETCH

DURATION: 10 TO 20 MINUTES

Perform anytime:

To loosen up while watching television or to stretch out before participating in a sport or endurance activity.



## 1 Neck Exercise

- Sit in chair, arms and shoulders relaxed.
- Start with head to one side.
- Slowly drop head forward and move it across the chest in a smooth semi-circle until facing the other side.
- Repeat.
- Movements should be gentle and controlled to avoid strain or dizziness.  
Do not perform when standing.



## ★ 2 Shoulder Release

- Sit or stand tall, arms relaxed.
- Shrug shoulders up toward ears and relax them down.
- Rotate shoulder in one direction s-l-o-w-l-y, making two or three complete rotations.
- Rotate shoulders the other direction three to five rotations.



### 3 Hand and Finger Exercises

- Sit or stand, arms extended forward.
- Close fist tightly, then extend fingers.
- Repeat five or six times.
- Relax arms at sides and “shake out” the hands loosely, from the wrists.



### 4 Ankle Rotations

- Sit in a chair or use a wall or chair for support when standing.
- Extend one leg and rotate the foot, making complete circles from the ankle.
- Repeat with other foot.



## 5 Sitting Stretches

### a) Single-Arm Stretch

- Inhale as you stretch one arm up over head as high as possible.
- Exhale as you relax and drop arm down.
- Alternate arms and repeat.

### b) Trunk Twist with Arm Stretch

- Stretch one arm to the side with palm facing back.
- Slowly twist head, shoulder, arm and trunk to side and back as far as comfortable for you. Hold for five seconds, then relax.
- Repeat to other side.



### Hip Stretch

- Sit on one side edge of chair.
- Exhale as you bring the outside knee toward your chest.
- Return foot to floor and inhale as you extend leg back as far as possible.
- Alternate legs.



## 6 Hamstring Stretch

### a) Easier: In a Chair

- Sit with one knee bent and the other leg resting on a chair or table of the same height.
- Keeping the leg straight, gently bend forward from the waist until a comfortable stretch is felt. Hold.
- Repeat with other leg.





#### or b) More difficult: On the Floor

- Lie on back, one knee well bent and the other leg extended.
- Slowly lift straight leg up toward head until a comfortable stretch is felt. Hold.
- Repeat with other leg.
- During this exercise keep lower back pressed to floor to protect back.
- A pillow or towel under head will add comfort and support.



#### 7 Side Bends

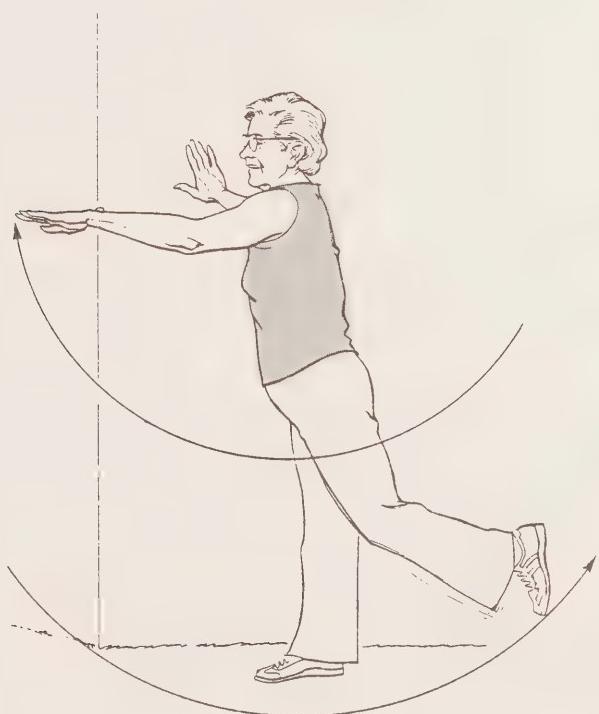
- **Caution:** If you are experiencing back pain, omit this exercise and check with your physician.
- Stand with feet wide apart.
- S-l-o-w-l-y reach one arm down the outside of the leg while exhaling. Hold.
- Repeat to the other side
- May also be done sitting: hold side edge of chair with one hand and reach down to other side.

## ★ Δ 8 Calf Stretch



- With both hands resting on a wall, place one foot ahead of the other, front leg bent and rear leg stretched out straight to the back.
- Keeping back heel flat on floor, lower hips in toward wall until comfortable stretch is felt in the back leg.
- Keep body straight and avoid arching the back.
- Hold, don't bounce.
- Change legs and repeat.

## 9 Leg and Arm Swing

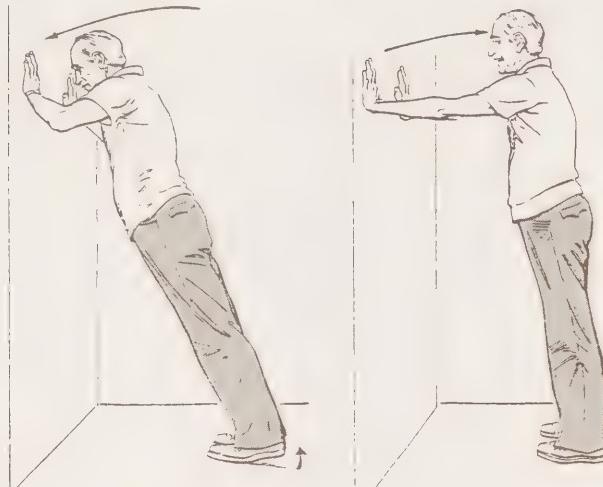


- Stand holding chair or wall with one hand for support.
- Swing arm and leg back and forth in a relaxed rhythmical manner.
- Turn around and repeat on other side.
- **Caution:** Do not over-extend the back by forcing the leg up high.

# ENDURANCE: SHAPE-UP

DURATION: 15 TO 30 MINUTES

These exercises are more strenuous and should be preceded by the warm-up.



## 10 Wall Push-Aways (for arm strength)

- Stand facing a wall, arms' length away.
- Inhale as you bend arms and lower your body to the wall. Allow heels to lift off floor.
- Exhale as you push back to standing position.



## ★11 Abdominal Exercises

### a) Easier: The Roll Down

- Sit with knees bent, hands resting on knees, and chin tucked in to chest.
- Exhale as you s-l-o-w-l-y lower down: first back, then shoulders, then head to touch floor.
- Knees remain bent throughout.
- Use arms to assist return to sitting position.
- Repeat.

### b) More Difficult: The Curl Up

- Lie on back, knees bent, feet flat on floor, arms relaxed at sides.
- Press small of back flat to the floor.
- Lift head and shoulders off floor and look toward knees while exhaling.
- Relax and repeat.
- When you have sufficient strength, curl up to sitting position, exhaling as you do.



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## ★12 Single Knee Tuck



- Lie on back, one leg straight and one leg bent.
- Keeping bent leg still, grasp hands behind the other knee and pull it toward chest while exhaling. Hold.
- Return to sitting position.
- Alternate legs and repeat.
- The lower back and head remain on the floor throughout.

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## 13 Side Leg Raises (For thighs, hips and waist)

- Lie on one side with head resting comfortably on extended arm, the other arm and hand resting on floor in front of waist (to maintain balance).
- Bottom leg should be bent at the knee to protect the back.
- Exhale as you slowly raise top leg and inhale as you lower it.
- Top leg should remain straight and toes should point forward throughout.
- Repeat on other side.



# ENDURANCE: AEROBICS

DURATION: 15 MINUTES MINIMUM FOR TRAINING EFFECT

**Important:** Always warm-up before performing endurance activities.



## 14 Walking or Other Aerobic Activity:

To develop heart-lung endurance, tone legs, burn calories, increase vigour and promote relaxation.

### Walking

- Begin with easy walking, while "shaking out" hands loosely and breathing naturally. This brings about a gradual increase in blood flow and prepares your body for more-vigorous movement. Then walk briskly. Contact the ground heel first in order to minimize strain on the joints.

Start with 10 minutes and gradually increase the time until you are able to walk **comfortably** for 30 minutes. Stay at this level for approximately two weeks. Then by monitoring your pace, you may safely begin to walk more quickly or attempt a few hills to further benefit the heart-lung system.

Take the simple "talk test". If at any time during exercise you cannot talk in a normal voice, you are pushing too hard and should slow down. The most accurate way to determine if you are exercising at the appropriate intensity is by counting your heart rate or pulse.

### Walk-Jog, Jogging

- When you are comfortable with a brisk 30-minute walk you may wish to begin to intersperse easy jogging steps with walking. The walking can be progressively decreased until continuous jogging is accomplished. If you feel stiff from the previous workout, don't stop but stretch the sore muscles and remain with that duration of jogging until the soreness disappears.

A good warm-up is especially important to prevent strain or injury. Exercises to stretch the hips, upper and lower leg muscles should be included. Jog, heel first, wear proper jogging shoes and pay careful attention

to blisters or other foot problems. Choose grass instead of pavement whenever possible to minimize stress on ankle and knee joints.

It is not always necessary to progress to jogging. Brisk walking which raises your heart rate to the target zone may be more appropriate for you. Remember: you should be able to carry on a conversation throughout. Monitor your pulse immediately after a jogging interval. Is it within the target zone?

#### Alternative aerobics

If you are unable to go out for a walk, you may want to perform aerobic activities in your home or apartment. Two alternatives which many enjoy are: dancing and marching to music or riding a stationary bicycle. Start with three to five minutes and gradually increase the duration.

Self monitor the intensity of the activity by checking your pulse. When appropriate for you, dance more vigorously or increase the tension on a stationary bicycle.

Some older Canadians are unnecessarily concerned about overdoing vigorous aerobics. Moderate your participation by following the advice of your physician and using common sense. Though monitoring your pulse may be the most exact way of setting limits, it is also important to be aware of body cues. Slow down and rest if you feel winded or fatigued. Progress at your own speed. "Listen" to your body — it has a very reliable signal system. Dizziness, nausea, breathlessness or tightness in the chest indicate overexertion, and the need to consult your doctor. Several months are often needed to restore aerobic fitness. Stick with it — those who do will literally stay "young at heart."

#### How to Monitor your Pulse

- **Radial Pulse Rate**

Place the middle three fingers of one hand along the thumb edge of the wrist just below the base of the thumb. Locate the pulse. Stop your activity momentarily and count your pulse (as illustrated) **for ten seconds**. Begin counting immediately because the heart rate will decrease significantly after 15 seconds. Finding your pulse and learning to get an accurate heart rate takes practice. It is advisable to try it out in various settings until you master the technique.

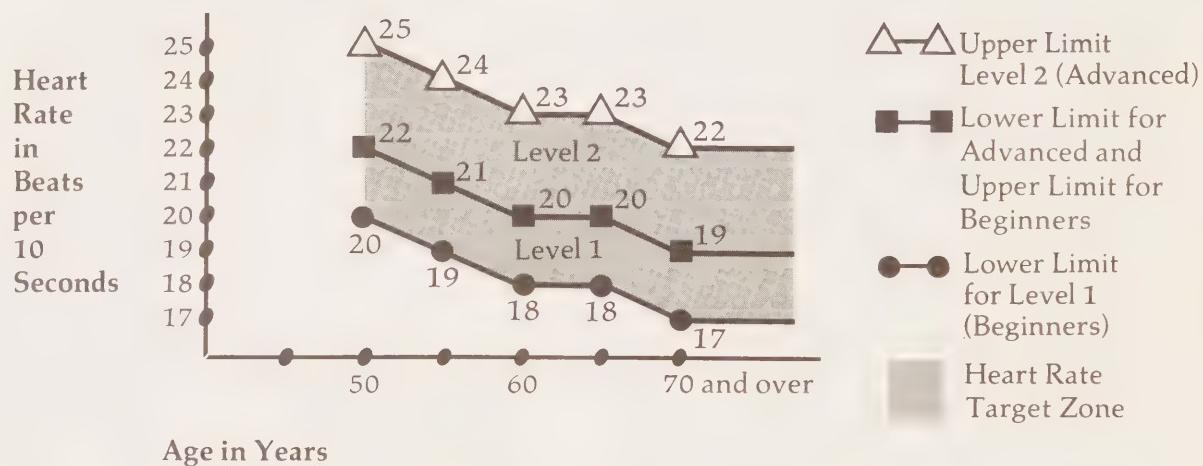


Consult the Target Heart Rate Chart to ensure that your pulse count is within the target zone appropriate for your age and level of activity. If it is too low, stride more briskly; if it is too high, slow your pace. When your measured pulse count falls within the Heart Rate Target Zone, you are achieving a beneficial "training effect." Below the lower limit, the intensity is insufficient to improve heart-lung fitness; above the upper limit there is little added benefit.

While exercising, beginners should attempt to maintain a heart rate within Level 1 for at least one month. Once your fitness level improves you may choose to go to Level 2. The advanced upper limit is appropriate only for those in very good condition.

A minimum of 15 minutes should be spent with the pulse rate in the target zone in order to achieve a significant conditioning effect. Start with two or three minutes only, and gradually increase the length of time spent within your target zone.

## TARGET HEART RATE CHART



### NOTE:

**LEVEL 1** Beginner, unaccustomed to vigorous activity

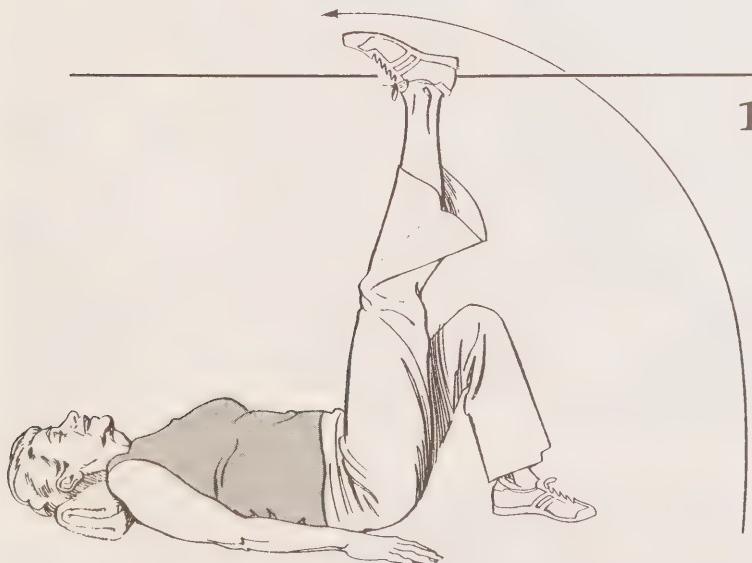
**LEVEL 2** Advanced, active in vigorous activity at least 3 times a week, or after a month of training at the Beginner level.

**\*Note:** Heart rate monitoring is *not* accurate for individuals who are taking medication for hypertension or heart disease which suppresses heart rate (eg. Inderal). For individuals on such medication, your doctor's advice and use of the "talk-test" is recommended.

# COOL-DOWN

DURATION: 5 TO 10 MINUTES

- Perform after aerobics or to relax at any time



## 15 Easy Walking

- Always end endurance activities or vigorous exercise with five minutes of easy walking, to redistribute blood and cool down the body.
- Continue until breathing and pulse rate have returned to normal.

## 16 Relaxation Exercise

- Lie on back, knees bent and legs resting on a couch or chair.
- Rest your head on a folded towel, back flat to floor and hands resting comfortably on your abdomen.
- Breathe quietly with no effort to inhale deeply until you feel completely relaxed.
- As you take a slightly deeper breath, let your abdomen rise; then s-l-o-w-l-y exhale through pursed lips, letting your abdomen relax downward.
- Repeat as desired.

## 17 Cool-Down Stretching

- To prevent muscle soreness, stretch out the muscles used vigorously by repeating a few of the stretching exercises described in the warm-up.
- For example, after walking or cycling repeat stretches for hips, hamstrings and calf muscles.

**FEEL GREAT!** Finish up with a bath, or warm then cool shower, dry on a rough towel and dress in fresh clothing.



*"Youth is a gift of nature. Age is a work of art."*

Anonymous

# *The Future is Now*

When Dr. Paul Dudley White, quoted in the prologue, chose to reverse the advice of those who say it is time to slow down and "take it easy", he was attempting in a dramatic way to emphasize that physical activity becomes more and more important as one grows older. Following his address, one of the audience offered to drive him to the airport, six miles away. Dr. White refused. He picked up his brief case, saying he always walked from downtown New York to the airport. Dr. White was in his 80s at the time.

Chronological aging is a continual process occurring in all of us, but growing old is not the same as being old. Our later years can bring us increased attractiveness, vigour and joy of living — more valuable perhaps, because it is something we have worked to attain.

Feel younger as you grow older!

**The time to begin is now.**

# Additional Resources for the Older Canadian

**Health and Fitness** — a 60-page comprehensive booklet on fitness and health.

General information, pamphlets, and posters on fitness.

Write to:  
Fitness Canada,  
365 Laurier Ave. West,  
Ottawa, K1A 0X6

**Canada Food Guide**, information, pamphlets or posters on nutrition, alcohol, drugs or tobacco.

Write to:  
Health Promotion Directorate,  
Health Services and Promotion Branch,  
Health and Welfare Canada,  
Ottawa, K1A 1B4

Funding is available for community-based projects in fitness and recreation for retired adults.

Write to:  
National Office, New Horizon Programs,  
Health and Welfare Canada,  
Ottawa, K1A 1B5

## FROM THE PROVINCES

For resource and information write to:

**British Columbia**  
Recreation and Sport Division,  
546 Yates St.  
Victoria V8W 1K8  
Tel: (604) 387-6080

### Alberta

Recreation Services to Special Groups,  
Department of Recreation and Parks,  
10363-108 Street, Sun Building  
Edmonton, T5J 1L8  
Tel: (403) 427-5721

### Saskatchewan

Department of Culture and Youth,  
11th Floor, Avord Tower,  
2002 Victoria St.,  
Regina, Tel (306) 565-5730

### Manitoba

Department of Fitness, Recreation and Sport,  
379 Broadway  
Winnipeg, R3C 3N4  
Tel: (204) 944-4347

### Ontario

Sports and Fitness Division,  
Ministry of Culture and Recreation,  
77 Bloor St. W.,  
Toronto, M7A 2R9  
Tel: (416) 965-0617

### Quebec

Haut-Commissariat à la Jeunesse, aux Loisirs  
et aux Sports  
1035 de la Chevrotière  
Québec, G1R 5A5  
Tel: (416) 643-5700

### New Brunswick

Department of Youth, Recreation and  
Cultural Resources,  
Kings Place  
P.O. Box 6000,  
Fredericton, E3B 5H1  
Tel: (506) 453-2491, 453-2578

### **Nova Scotia**

Department of Recreation,  
Bank of Montreal Tower,  
P.O. Box 864,  
Halifax, B3J 2V2  
Tel: (02) 424-7554

### **Prince Edward Island**

Division of Youth, Fitness and Recreation,  
Department of Education,  
P.O. Box 2000,  
Charlottetown, C1A 7N8  
Tel: (902) 3504

### **Newfoundland**

Recreation and Sports Services,  
Workers Compensation Building,  
P.O. Box 2016  
St. John's A1C 5R8  
Tel: (709) 737-2779

### **Northwest Territories**

Recreation Division  
Department of Natural and Cultural Affairs,  
Government of the NWT,  
Yellowknife X1A 2L9  
Tel: (403) 873-7245

### **Yukon Territory**

Recreation Branch  
Department of Education  
P.O. Box 2703  
Whitehorse, Y1A 2C6  
Tel: (403) 667-5254

### **WANT TO READ MORE?**

**Aquabics**, by R. Lough and D. Stinson.  
Fitzhenry and Whiteside, 1973

**Be Alive as Long as You Live**, Mobility Exercises for the Older Person by L.J. Frankel and B.B. Richard. Preventicare Publications 1977.

**Fitness for You — The Senior Adult**, by J. Stuart Sweet. Available from Ontario Government Bookstore, 880 Bay Street, Toronto M5S 1Z8. Cost 50¢.

**Walk! A Handbook**, by J. Man. Paddington Press, 1979.

**Vigor Regained**, by J. de Vries. Prentice-Hall Inc., 1974.

**The Personal Fitness Guide**, Contact your local Red Cross Office.

**Rainbow Exercise Book for Senior Citizens**, Available from Action BC, 1600 West 6th Ave., Vancouver, 6V6 1R3. Cost: \$2.50.

**Fitness for People over 60**, by M. MacCallum. (A maintenance program suitable for instructors or older persons with experience in fitness classes.) Available from Recreation Branch, Senior Citizens Section, City of Ottawa, 111 Sussex Drive, Ottawa K1N 5A1. Cost \$1.00

**Nutriscore**, by R. Fremen and Z. Sabry. Methuen, 1976.

**The Complete Family Book of Nutrition and Meal Planning**, by W.J. Le Riche. Hume Publishing, 1976.

**Food and Fitness**. Available from Ontario Blue Cross, 150 Ferand Drive, Don Mills, Ont. M3C 1H6. No charge for single copies.

## Acknowledgements

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